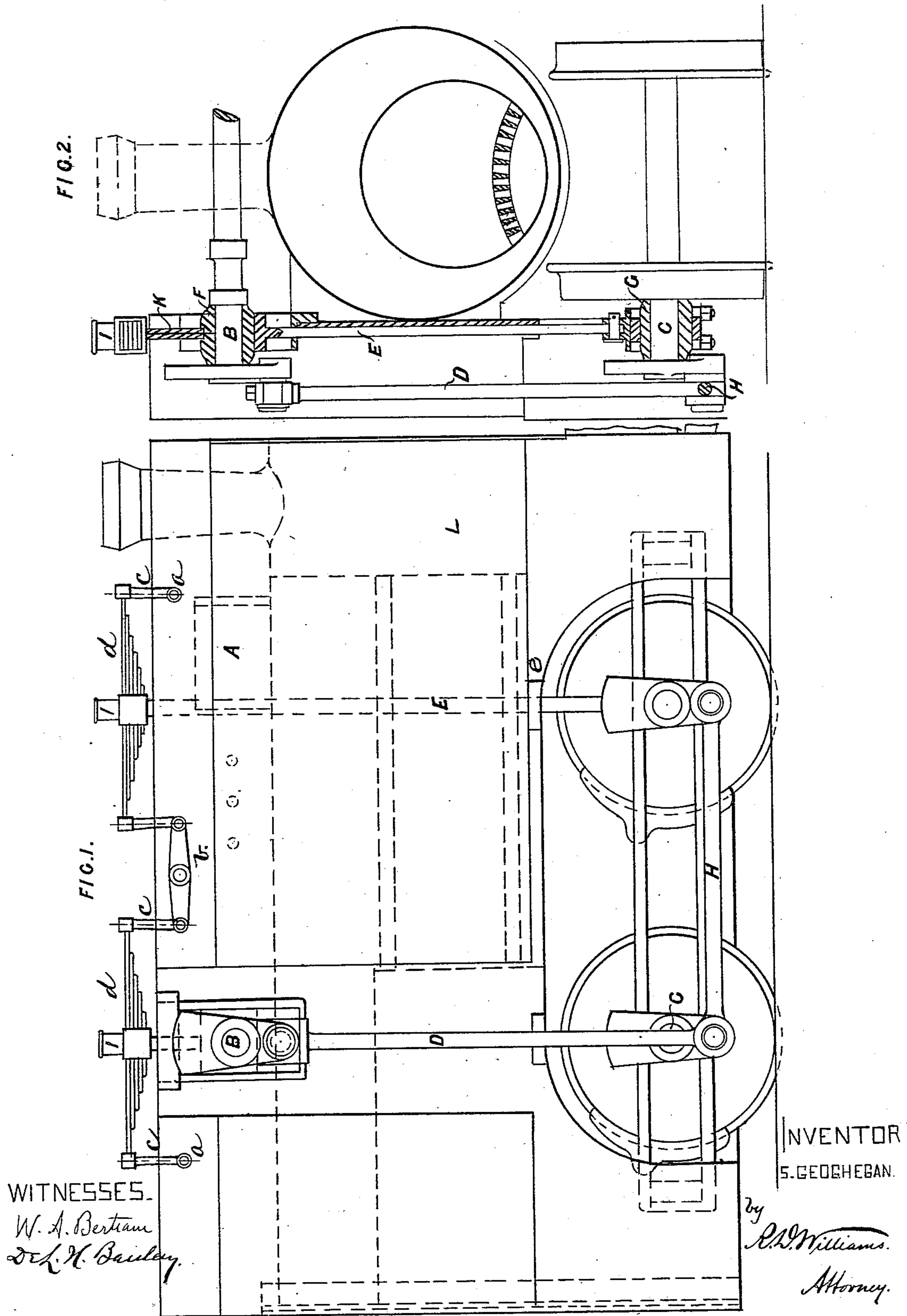


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Driving Mechanism for Street-Locomotives, &c.
No. 226,230. Patented April 6, 1880.



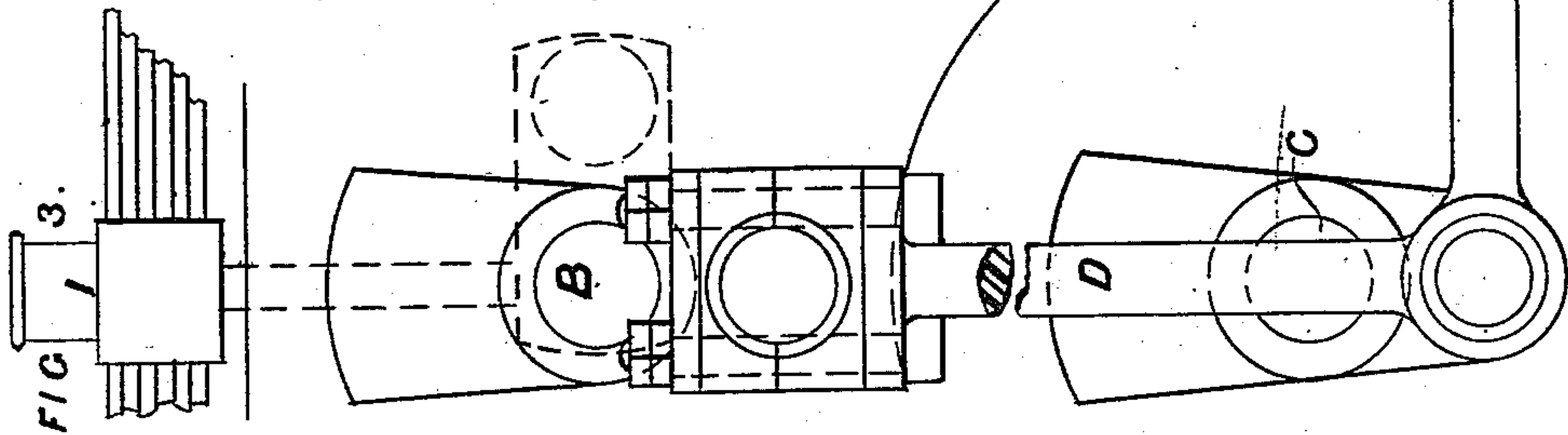
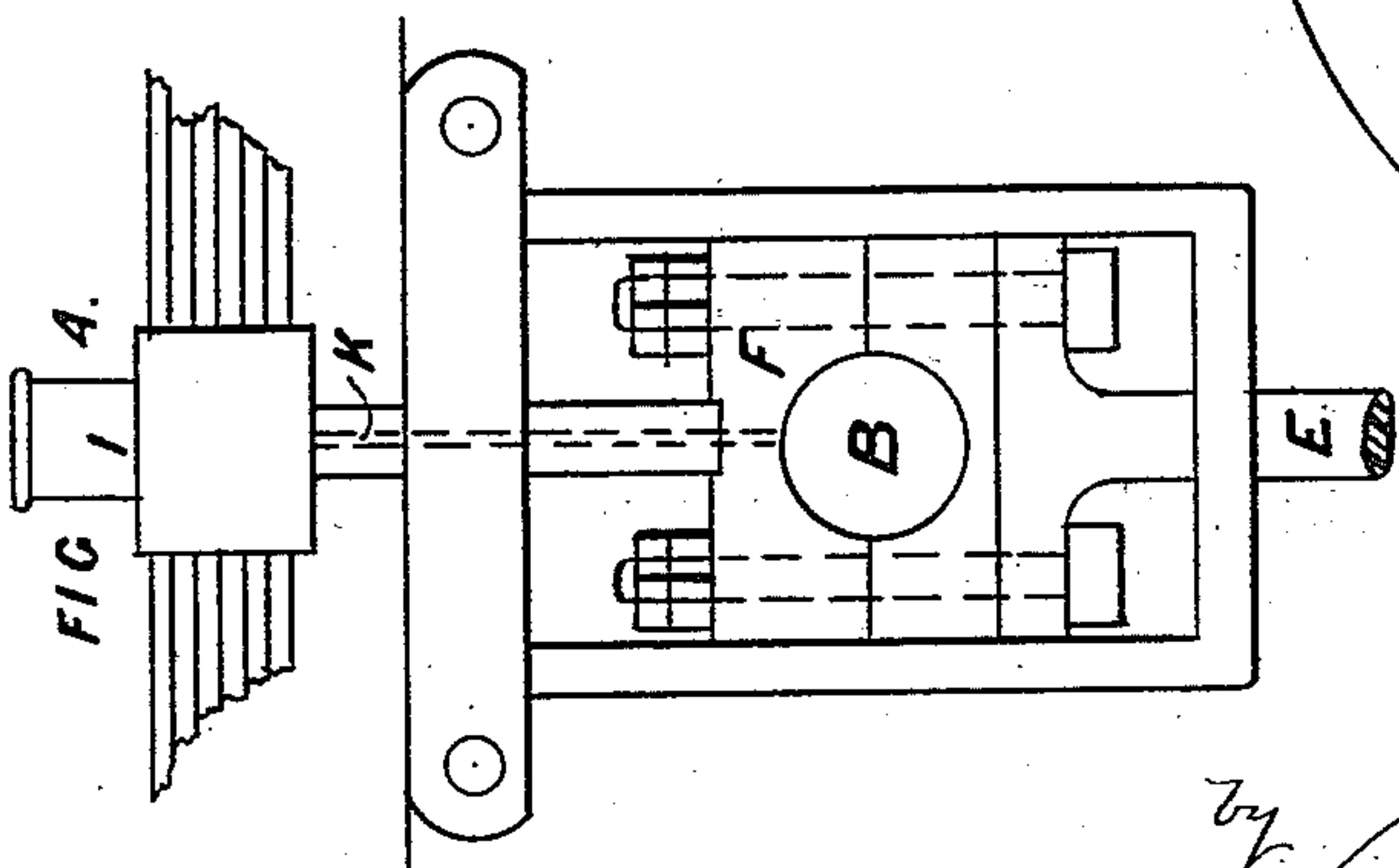
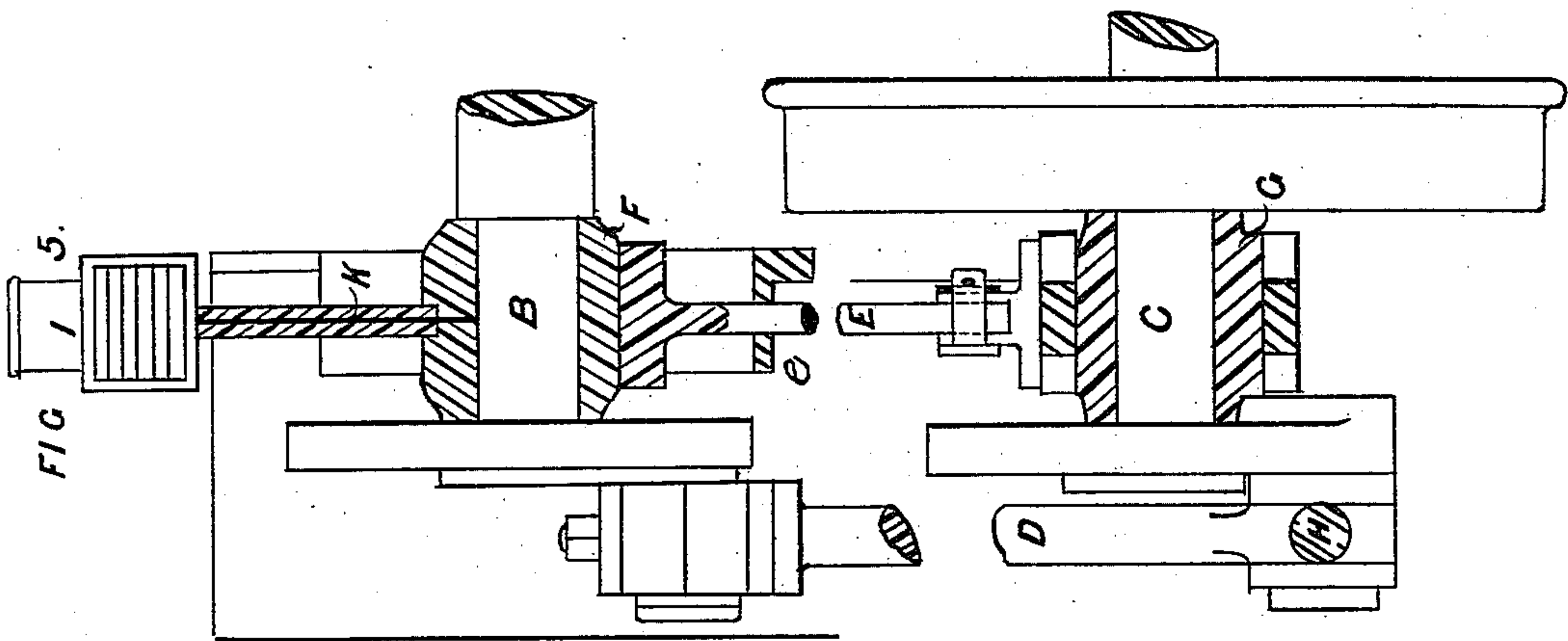
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SAMUEL GEOGHEGAN, OF DUBLIN, IRELAND.

DRIVING MECHANISM FOR STREET-LOCOMOTIVES, &c.

SPECIFICATION forming part of Letters Patent No. 226,230, dated April 6, 1880.

Application filed January 2, 1880.

To all whom it may concern:

Be it known that I, SAMUEL GEOGHEGAN, of the city of Dublin, Ireland, have invented new and useful Improvements in the Construction and Arrangement of the Driving Mechanism of Street-Locomotive Engines, applicable also to tram-cars and other vehicles propelled by gas, steam, or other motive power, of which the following is a specification.

10 This invention relates to improvements applied to locomotive-engines, tram-cars, and other vehicles propelled by gas, steam, or other motive power, whereby the driving mechanism is removed from proximity to dirt and dust, while it is rendered easily accessible and suitable provision is made for the use of springs.

My improvements consist in placing the cylinder or cylinders and crank-shaft upon the top of the boiler in a horizontal position and imparting motion to the axle of the driving-wheels by crank and connecting-rod direct from the crank-shaft above on both sides of the vehicle; also, in connecting the upper and lower bearings—that is to say, the crank-shaft and axle-bearings—rigidly by a pillar or post.

25 On the accompanying two sheets of drawings, forming part of this specification, Figure 1 represents a side elevation of a locomotive-engine embodying my invention; Fig. 2, an end view of same, partly in section; Fig. 3, an enlarged view of driving mechanism; Fig. 4, a detail of crank-shaft bearing, and Fig. 5 an end view of Fig. 3.

35 A A indicate the cylinders; B, the crank-shaft; C, axle of driving-wheels; D, the connecting-rod; E, the pillar or post; F, the bearing for crank-shaft; G, the bearing for axle C; H, coupling-rod; I I, oil-boxes; K K, channels for oil.

40 The boiler, upon which the cylinders, reversing-links, &c., are carried, is, by preference,

inclosed by side pieces, L, which are firmly bolted to the boiler. To these pieces are pivoted at *a* rods *c c*, that are at their opposite ends pivoted to the springs *d*, as shown. The rods from the inner ends of the springs are pivoted to a lever, *b*, so as to equalize the jolt.

The engine is supported on the axles by means of posts E, extending from the springs *d* to the bearings of the axles and passing freely through lugs *e* on the side pieces, L.

The connecting-rods D from the crank-shaft B are cranked to the driving-wheels, which are coupled, as shown.

Having now described the nature of my invention, and in what manner it may be performed or carried into practical effect, what I claim is—

1. A tramway or locomotive engine having its cylinder surmounting the boiler and provided with a transverse crank-shaft whose connecting-rod is cranked to the driving-wheels, as set forth.

2. A tramway or locomotive engine whose boiler is inclosed by side pieces, L, as set forth, and supported on posts E, extending from the axle-bearings to springs *d*, which latter are attached at their ends to the side pieces, L, substantially as described.

3. In combination with the boiler and driving mechanism mounted thereon, the posts E, springs *d*, rods *c*, and connecting-rods D, as set forth.

4. In combination with the boiler and driving mechanism mounted thereon, the springs *d*, lever *b*, rods *c*, and posts E, as set forth.

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